

Parasitology 2018: Fish infected with trematode encysted metacercariae and its role in transmitting parasitic diseases to humans and domestic animals- Faiza M El Assal- Cairo University, Egypt**Faiza M El Assal***Cairo University, Egypt*

Shortage in animal protein resources is a problem facing developing countries. Fish may be a good solution for this problem. But, fish may cause many serious diseases by carrying trematode encysted metacercariae. Fish-born zoonotic trematodes cause great public health problems worldwide. An estimate of 18- 40 million infected people with intestinal flukes was reported by the WHO. Meanwhile, there are unknown million infected. Consuming raw fish and crustaceans (sushi, sashimi, koi-pla etc.) in particular in the Far East, is becoming increasingly common in many countries. This increase in the consumption of raw sea food led to a rise in the incidence of zoonotic diseases. Fish infected with heterophyid encysted metacercariae, commonly consumed by local inhabitants, pose a serious zoonotic risk. Infection may cause, beside diseases (e.g.Heterophyiasis), loss of fish in lakes and rivers. Morbidity and serious damages to aquacultures. Microscopical examination of 452 fresh and brackish water fish, representing *Clarias gariepinus*, *Lebeo noliticus* and *Mugil cephalus* species, collected from low socioeconomic areas, allover one year, revealed the occurrence of trematode encysted metacercariae in their flesh. The infection rate differed according to the fish species, season and fish weight. The impact of infection on humans and animals is discussed as well as the prevention protocol for parasitic diseases associated with infected fish.

An infectious disease caused or spread by a parasite is a bacterial disease also known as parasitosis. Many parasites do not cause diseases, as this can eventually lead to both organism and host death. Parasites which infect humans are called parasites of humans. Parasitic diseases can affect nearly all living organisms, including mammals and plants. Parasite signs can not always be apparent. These symptoms may also cause anemia or a deficiency in the hormone. Many of the symptoms induced by multiple worm infestations may include itching affecting the anus or vaginal region, stomach pain , weight loss, increased appetite, bowel

obstructions, diarrhea , and vomiting ultimately leading to dehydration, sleeping issues, worms in the vomit or stools, anaemia, muscles or joints, general discomfort, asthma, exhaustion, and nervousness. Symptoms. The symptoms of parasitic diseases vary from moderate malaise to death. The *Necator americanus* and *Ancylostoma duodenale* nematode parasites cause human hookworm infection which leads to anaemia, protein malnutrition and shortness of breath and weakness in severely malnourished people. The virus affects around 740 million people from the tropics in developing countries, including children and adults, especially in poor rural areas in sub-Saharan Africa, Latin America, Southeast Asia and China. Chronic hookworm in children causes impaired physical and mental growth, decreased school performance and reduced attendance. Pregnant women infected by a hookworm infection can also experience anemia, leading to adverse outcomes for both mom and baby. Many of them include: low birth weight, reduced milk production and increased risk of death for mom and baby. Infections with parasites typically may be treated with antiparasitic medications. Albendazole and mebendazole have been the therapies for control of hookworm infection offered to whole populations. Nonetheless, it is a expensive choice and both children and adults are reinfected within a few months of deparasitation, which poses concerns as the medication must be performed regularly and the drug resistance. Pyrantel pamoate was another drug prescribed for suppressing worm infections. There is no cure for certain parasite diseases and, in the case of extreme symptoms, medicine is given intended to kill the parasite, whereas in other cases, symptom relief options are used. Recent articles have also discussed using viruses for the diagnosis of protozoa-infections. While parasites behave as organisms such as bacteria, the use of the word "parasitic disease" is generally more limited. Protozoa (causing protozoan infection), helminths (helminthiasis), and ectoparasites are the

three major forms of organisms that cause such conditions. Protozoa and helminths are typically endoparasites (typically inhabiting the host 's body), whereas ectoparasites generally remain on the host 's surface. Protozoa are microscopic , single-celled organisms which belong to the Protista kingdom. Helminths on the other hand are multicellular, macroscopic organisms which belong to the Animalia kingdom. Protozoans get the nutrients they need by pinocytosis and phagocytosis. Class Helminths Cestoidea and Trematoda consume nutrients, while nematodes receive essential nutrition by ingestion. Sometimes the concept of "parasitic disease" is limited to endoparasite diseases. Parasites are living beings that use other living things for food and a place to live-like your body. You may get them from food or water infected, a bug bite or sexual touch. Some parasite diseases are treated with ease and others are not. The size of the parasites ranges from small, one-celled organisms called protozoa to worms that can be seen with the naked eye. A few parasite diseases occur in the U.S. Contaminated water sources can cause infections with Giardia. Cats can spread toxoplasmosis to pregnant women, which is harmful. Some are popular in other parts of the world, as malaria. If you're travelling, drinking only water that you know is safe is vital. Prevention is especially important. Parasite disease vaccines are not available. Parasitic infections may be treated with certain medicines. Parasites usually enter the body by mouth or skin. Close contact with pets can lead to infestation of parasites, as dogs and cats harbor many parasites. Certain risks that can lead people to acquire parasites include barefoot walking, insufficient fecal disposal, lack of grooming, near contact with anyone carrying particular parasites and consuming uncooked foods, unwashed fruits and vegetables. Many of them include: low birth weight, reduced milk production and increased risk of death for mom and baby. Infections with parasites typically may be treated with antiparasitic medications. Albendazole and mebendazole have been the therapies for control of hookworm infection offered to whole populations. Nonetheless, it is a expensive choice and both children and adults are reinfected within a few months of deparasitation, which poses concerns as the medication must be performed regularly and the drug resistance.